## REQUEST FOR PAIR ACCESS TO RELATED CASE

It is again requested that the 09/703,057 case be made available for inspection on PAIR by anyone with access to the present case, pursuant to 37 CFR 1.14 (a)(1). The 09/703,057 case is incorporated by reference in Standard Paragraph [0008]. Under 37 CFR 1.14 (a)(1)(iv) and (v), the 09/703,057 case (even if abandoned or pending) should be made available to the public if the application is identified in a U.S. patent. It is believed that these sections of 37 CFR 1.14 (a)(1)(iv) and (v) also apply to persons with access to the referencing document (which is the present application).

## REMARKS

Claims 1-54 are pending in this application. Reconsideration and withdrawal of the rejections set forth in the Office Action dated March 5, 2007, is respectfully requested in view of the following remarks.

### Rejections Under 35 U.S.C. §103

In the outstanding Office Action, the Examiner rejected claims under 35 U.S.C. §103(a) as unpatentable over the basic reference of the *Rao* U.S. Patent No. 6,674,756 taken in view of Armstrong, et al., U.S. Patent no. 6,691,146 (hereinafter *Armstrong*), and Jourdenais, et al., U.S. Patent No. 5,278,986 (hereinafter *Jourdenais*).

**Response**

This rejection is respectfully traversed because there is no showing of obviousness under 35 U.S.C. §103.

Rao is cited as showing a router capable of implementing multiple virtual routers and partitioning into the multiple virtual routers. Rao fails to show or suggest the use of a common OS and in fact does not even reference the OS as such. Rao fails to suggest a "common operating system" and therefore cannot be used to show "a plurality of processes ... sharing said common operating system". (Language from claim 27; claim 1 similar.)

Taken in context, invention as claimed in claim 1 specifies:

> "... a host router running a common operating system and a master control processor ... having a capability of running plural independent processes and routing application copies corresponding to the independent processes, but sharing said common operating system ... virtual router domains established by ... independent processes, the virtual router domains logically partitioned within [the] host router, each ... process running in a ... virtual router domain independently of all other ... virtual router domains on top of said common operating system ... ."

Claim 27 specifies:

> A method of logically partitioning a host router into virtual router domains, comprising configuring the kernel of a single common operating system running in said host router [and independent processes] and application [copies] corresponding to the independent process to run on said host router, in a manner to permit running a plurality of said independent processes and routing application copies corresponding to the independent processes, but sharing said common operating system ... a plurality of virtual router domains established by ones of said independent processes within said host router ... generating an independent identical set of replica arrays of global variables for each [of a plurality of] virtual router domain; and associating a process with each said virtual router domain of said host router, such that said processes run in said virtual router domains

> independently of one another on top of said single common operating system of said host router using a master control processor.

As identified in Applicants' response of December 7, 2006, there is no suggestion in the cited art (*Rao* and *Jourdenais*) that a host router use a common operating system. Instead the cited art runs separate independent processes for routing application copies corresponding to the independent processes. This remains the case with the addition of *Armstrong*.

*Armstrong* describes the use of a "partition manager" used to run different OS on the same computer (a type of bootloader). *Armstrong* does not use the OS for this function. The partition manager's function is similar to that of a multiple OS bootloader, in that it permits loading of the multiple OS. (See *Armstrong* at col. 1, lines 63-67.) This specifically contradicts the present invention in which the multiple partitions can be used "in a manner to permit running a plurality of ... independent processes... but sharing [a] common OS ... ." (See claim 27; claim 1 similar.) In *Armstrong*, the different partitions run processes with a different OS:

> Thus, primary partition 124 can run the OS/400 operating system, while secondary partition 126 can run another instance of OS/400, possibly a different release, or with different environment settings (e.g., time zone). The operating system 127 in the secondary partition 126 could even be different than OS/400, provided it is compatible with the hardware and the operating system interface 123. In this manner the logical partitions can provide completely different computing environments on the same physical computer system. (*Armstrong* at col. 3, lines 50-60.)

*Armstrong* therefore precludes the running of plural independent processes sharing a common OS. The description is that of hooks in the "partition manager" which can be used by one of the OSs to execute configuration changes on the "partition manager".

It is further pointed out that the *Armstrong* partition manager (which performs the described bootloader functions) is in fact separate from the OS:

> A partition manager 270 provides the low-level control of computer system 200. Partition manager 270 includes task support 271, synchronization primitives 272, main storage management 273, heap management 274, an I/O subsystem 275, and a user interface 276, which are similar to the corresponding elements 251-256 of the same names in the kernel 250 of operating system 230. The reason that partition manager 270 needs to provide these same functions is clear: when an operating system is installed in a logical partition, it no longer has complete control of the computer system, but must share control with the operating systems in other logical partitions. The low-level functions that were previously performed by the operating systems must now be performed by the partition manager, which interacts with the operating systems in the logical partitions to perform the requested functions as needed. *(Armstrong* at col. 5, lines 36-51.)

The above text, in addition to describing the function as separate from the OS, describes "operating systems in other logical partitions". This contradicts the concept of operating through the partitions with a common OS, as claimed by the Applicants.

Motivation is Absent in the Prior Art

It is respectfully submitted that the combination fails to meet the requirements of a showing of obviousness under 35 U.S.C. §103(a) because there is no suggestion of a motivation to combine the references in any manner which would result in running plural independent processes but sharing a common OS.

Referring to filling in Armstrong's "partition manager", the standard for obviousness is not one of technical skill; rather it is one of motivation to combine the references.

> A patent may not be obtained . . . if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. 35 U.S.C. § 103.

Obviousness is a question of law based on the following factual inquiries: 1) the scope and content of the prior art, 2) the differences between the prior art and the claims, 3) the level of ordinary skill in the art, and 4) objective evidence of nonobviousness. *Graham v. John Deere Co.*, 383 U.S. 1, 17, 148 USPQ 459, 467 (1966). The person of ordinary skill in the art is presumed to know all of the prior art in the field of the inventor's endeavor and prior art solutions for a common problem even if outside that field. *In re Nilssen*, 851 F.2d 1401, 7 USPQ2d 1500 (Fed. Cir. 1988) (That view accords with the plethora of this Court's precedent). For the purpose of combining references, the references need not explicitly suggest combining teachings, much less specific references. *Id.* There must be some reason, suggestion or motivation found in the prior art whereby a person of ordinary skill in the field of the invention would make the combination of references necessary to render a claim obvious. Such suggestion or motivation to combine prior art teachings can derive solely from the existence of the teaching, which one of ordinary skill in the art would be presumed to know, and the use of that teaching to solve the same or similar problem which it addresses. *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992).

The *Dystar* Standard for Motivation

A *prima facie* case of obviousness must also include a showing of the reasons why it would be obvious to modify the references to produce the present invention. *See Dystar Textilfarben GMBH v, C. H. Patrick,* 464 F.3d 1356 (Fed. Cir. 2006). The Examiner bears the initial burden to provide some convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings. *Id.* at 1366. This burden has not been met because there is no showing of why it would be obvious to modify the references so as to provide the operation "in a manner to permit running a plurality of ... independent processes... but sharing [a] common OS". Specifically, *Rao* describes multiple virtual routers but fails to suggest separate processing resources using a common OS. Instead, *Rao* uses distributed processing. See *Rao* at col. 10, lines 32-58:

> "One of the features of the multi-service network switch of FIG. 1 is IP (layer three) routing using a distributed processing and packet forwarding architecture."

*Armstrong* describes a partition, but in connection, but specifically does not operate a common OS (beyond the "partition manager" itself). The entire purpose of the *Armstrong* "partition manager" is to permit separate operating systems. It is further noted that the "partition manager" operates outside of the OS, except for the program hooks. In fact the program hooks themselves originate from an OS separate from the "partition manager".

The primary reference, *Rao,* further does not suggest operation analogous to Applicants' claimed multiple independent processes. There is no suggestion of multiple parallel processes of that type running under a common kernel; no separate programming space; no separate threads. This is because *Rao* specifically runs the multiple virtual routers under a single process. This is

not cured by *Armstrong*. *Jourdenais* also fails to suggest the common operating system and master control processor combination. Therefore *Jourdenais* cannot be used to suggest using the variables stored in an array in the implementation of a common operating system running plural processes for providing the multiple VPNs under a master control processor.

As previously pointed out, the common operating system in combination with the master control processor is significant because the prior art fails to suggest doing this while using a common operating system. As applied to the amended claims, the prior art fails to suggest doing this with multiple independent processes.

**Lack of Incentive to Combine under the Rule of KSR International**

To show obviousness under §103, it is necessary to show an incentive to benefit from the change. *KSR International Co. v. Teleflex Inc. et al.*, slip opinion No. 04-1350 (S.Ct, 30 Apr 2007)

> "The proper question to have asked was whether a pedal designer of ordinary skill, facing the wide range of needs created by developments in the field of endeavor, would have seen a benefit to upgrading Asano with a sensor. In automotive design, as in many other fields, the interaction of multiple components means that changing one component often requires the others to be modified as well." (*id* at pp. 20-21)

A demonstration of obviousness under §103 requires that the combination represent a design step well within the grasp of a person of ordinary skill in the relevant art. *id.*

> "KSR provided convincing evidence that mounting a modular sensor on a fixed pivot point of the Asano pedal was a design step well within the grasp of a person of ordinary skill in the relevant art. (*id* at pp. 20-21)

It is respectfully submitted that there is no suggestion of an incentive to benefit from the change because there is no suggestion of the change in the first instance. The prior art shows the opposite.

**Rejections of Dependent Claims**

The remaining claims depend directly or ultimately from independent claims 1 or 27, and are also patentable for the reasons set forth above with respect to those claims. In this regard, there are particular features which, in combination with the features of independent claims 1 or 27, set forth an environment in which multiple VPNs operate under separate processes, under a common operating system. For example claims 11 and 37 describe:

> "... [plural] interfaces partitioned interchangeably among said virtual router domains, ... [and] associated with only one such virtual router domain at one time, but can be repartitioned among said virtual router domains to reconfigure said host router." (Claim 11.)

This sets forth an operation which cannot occur by the use of any combination presented by the prior art of record. This is made clear by the rejection as set forth in Section 20 of the outstanding Office Action, in which *Rao* is described as, "associating only one such virtual router domain at one time but can be repartitioned among virtual router domains to reconfigure said host router." The present invention can repartition but can operate multiple virtual router domains at one time. This is clear from Applicants' Figure, as well as independent claims 1 and 27.

Applicants further refer to the arguments relating to the dependent claims, as set forth in the Response submitted June 8, 2006. These arguments are hereby incorporated by reference.

Accordingly, it is respectfully requested that the Examiner withdraw the obviousness rejections under 35 U.S.C. §103(a).

## CONCLUSION

In light of the foregoing, Applicants submit that the application is in condition for allowance. Applicant respectfully request that the Examiner withdraw the rejections and the case be passed to issuance. If the Examiner believes the application is not in condition for allowance, Applicants respectfully request that the Examiner call the undersigned.

Respectfully submitted,

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